THE RISKS AND REWARDS OF PARTICIPATION IN DEMAND SIDE BIDDING PROGRAMS; AN ENERGY SERVICE COMPANY PERSPECTIVE

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ABSTRACT:

The purpose of this paper is to summarize from an ESCO viewpoint some of the risks and rewards of participating in DSM bidding programs before deciding to submit a bid.

TEXT:

During the last two decades, utilities have sought to avoid the need for increased generation capacity by investing in customer end use efficiency. This investment effort has occured through internally managed conservation programs and within the past several years, supplemented by all-source and DSM bidding programs. Energy Service Companies (ESCOs) have participated extensively in these bidding programs by acting as third party contractors who purchase, finance, install and operate conservation equipment at utility customer facilities in return for utility payments based on measured kW or kWh savings over a ten to fifteen year term.

The rewards are more difficult to specify than the risks primarily because bidding programs are still in their infancy. The rewards of bidding programs for the ESCO include:

Opportunities for fair returns on investments including the risks, and;

Opportunities for additional transactions with utility customers by providing more comprehensive services beyond the scope of the utility bid program.

The potential risks to the ESCO include:

Competition with the utility's own DSM programs;

Changes in utility load requirements;

The overall economic strength of the utility service territory;

Regulatory support of bid programs.

Following is an elaboration of some of the risks associated with participation by ESCOs in utility sponsored DSM programs:

1. Utility Competition

ESCOs seeking to participate in utility sponsored DSM bidding programs must evaluate current and planned rebate and/or customized programs budgeted by utilities. The implementation of direct utility/customer sponsored programs can have a major impact on the ESCO's ability to sell contracted bidded capacity to the utility's customers.

In order to bid successfully, ESCOs must make a substantial upfront investment in the preparation and negotiation of a utility bid. One concern of ESCOs is that the market opportunity solicited in the utility bid will be eroded by expansion of non-bidding programs and/or by future regulatory rulemaking allowing for new utility programs which compete directly with the ESCO's bid program.

ESCOs are ever mindful of the consequences of competing with existing and new utility sponsored conservation programs. This is especially true when new programs are introduced during the period of time when ESCOs are obligated under contract with the utility to deliver capacity and energy to the utility. Introduction of new programs by the utility can confuse the utility's customers as to which conservation programs offer the best deal. The utility customer may appreciate having the choice between utility sponsored rebate programs and third party service providers. However, from an ESCO viewpoint, competition with utility sponsored programs can erode the market and thereby result in penalties to the ESCO.

ESCOs can perform a useful function for the utility's customers and shareholders by

delivering verifiable energy and capacity at a price competitive with alternative sources of supply. Within that context, an effective ESCO - utility relationship will emphasize cooperation to meet the utility's short and long term load management objectives.

However, a barrier to that cooperative relationship exists in the arena of new program development whereby a utility can effectively exclude ESCOs from the market by undertaking conservation programs which do not allow the use of performance based contractors, and which use their customer data base to market those programs. To address that barrier, ESCOs have proposed to eliminate any economic bias against third party providers of conservation services by ensuring that savings by third party providers would earn utility shareholders an incentive return equal to what shareholders would earn under monopoly conditions.

Some utilities have employed a collaborative planning approach which has allowed interested parties to participate in the development of bidding program design and thereby strengthen the link between utility customer needs and utility program design. In this manner, utility programs need not compete with one another, and market niches can be linked with the appropriate program delivery mechanisms be they through third party contractors, utility rebates, direct utility financing or a standard offer.

In summary, ESCO concern over utility competition is driven by a need for protection against significant damages under their existing contracts as much as a desire for participation in future markets. More importantly, ESCO competition with utility sponsored programs can be mitigated in the program design phase by the identification of specific customer and utility needs and linking those needs to the appropriate internal or third party delivery vehicles.

2. Changes in Utility Load Requirements

Changes in utility load requirements can impact the business environment for both the utility and the ESCO. When load requirements fall below projections, the utility will be less likely to embrace a DSM bid program, especially if the load shortfall occurs between the issuance of a bid solicitation and the announcement of a final award group. Understandibly, the utility is not interested in supporting conservation programs which will result in lost revenues (especially if there exists no revenue loss recovery and/or the utility has excess capacity). Similarly, ESCOs will be wary about committing the required resources to bid on a changing auction block size.

3. The Overall Economic Strength of the Utility Service Territory

The overall strength of the utility service territory will have a direct impact on utility customer operating hours. When annual operating hours fall below a certain level, payments for savings from the utility to the ESCO do not offset the project fixed and variable costs. This is because utilities will not pay ESCOs for conservation resulting from reduced operating hours. The principal risk to the ESCO in its agreement with the utility is the continued ability to deliver capacity over a fixed term. In a weak market economy, customers will be reluctant to commit to long term agreements which include performance requirements related to operating hours.

4. Regulatory Support of Bid Programs

Regulatory clarity is essential in order for the utility and ESCOs to work together in an effective manner. A fundamental ESCO concern is the existence of "regulatory out" clauses which do not bind the rulings of a current regulatory body to rulings of a future body. An example is the possibility of a disallowance of previously approved utility - ESCO contracts resulting from a regulatory prudency review.

Additional issues requiring regulatory clarity include revenue loss recovery, cost effectiveness criteria for project acceptance by the utility, and cross class subsidy issues. From the ESCO viewpoint, it is preferable to have clear, consistent policies upon which to make a business decision to invest resources in a bid.

Other Factors in Deciding to Bid and Implement an Awarded Program

ESCOs consider additional factors in deciding whether to bid a request for proposal and implement a negotiated agreement.

1. ESCOs look at the probability of profitability. As discussed previously, this is a function of the strength of the regulatory environment in which the utility operates, the economic health of the utility's service territory, the transaction costs incurred during development and implementation of an awarded bid, and the existing utility programs that its customers can use for DSM project implementation.

2. ESCOs consider the market potential for matching the utility's customer technology needs with the specific ESCO's expertise. Some ESCOs specialize in particular residential, industrial or commercial/institutional market niches. Within each of those market niches, ESCOs may have further developed engineering specialties with respect to the design, installation and monitoring of individual technologies such as lighting, motors, variable frequency drives, thermal storage systems and industrial process.

3. ESCOs examine the available business opportunities for installation of DSM measures within the utility's service territory. Those opportunities are a function of local economic conditions, types of facilities available for conservation implementation, penetration of existing utility conservation programs, and the availability of qualified contractors to install, monitor and maintain equipment.

4. A third factor is the treatment of environmental externalities especially as related to the Clean Air act of 1991. Utilities will be eligible for pollution bonuses by successfully engaging in DSM activities. To the extent that DSM results are marketable through emissions trading, the utility can market their pollution bonuses to other utilities based on measured conservation results. Generating emissions trading opportunities for utilities may create business opportunities for ESCOs in the future.

5. Measurement strategies employed in bid programs are the cornerstones to a program's success. The principle objective of a sound measurement strategy is to verify energy and capacity savings to the utility, the regulators, the customer and the ESCO. The utilities and regulators will want a quantified basis for paying for and evaluating delivered capacity based on performance of equipment as installed at a customer's facility. The customer will want to know what results they are paying for especially if there is a contribution based on a percentage of actual savings. The ESCO will want to know revenues to be paid by both the customer and the utility based on the performance of the installed equipment. In addition, an ESCO will want to identify material changes that occur in operating hours and facility usage during the term of the agreement with the utility customer.

Factors which enhance a successful measurement plan include: cost effectiveness of obtaining monitored results; ability to measure technology specific installations and interactive effects including reduction in maintenance costs; and flexibility to include new technologies as they are developed during the term of the contracts between the utility, ESCO and customer.

6. An underlying premise of performance contracting, especially in the DSM bidding arena, is the allocation of risk between the utility, the customer and the ESCO. Within DSM bid programs, two agreements are in place: one between the ESCO and the utility and one between the ESCO and each utility customer.

The sponsoring utility contracts with an ESCO to market conservation services to utility customers with the objective of delivering measured energy and capacity to the utility over a period of time. If energy and capacity are not delivered and maintained on a sustained basis by the ESCO, payment for savings by the utility will not be made to the ESCO. In addition, liquidated damages and penalty fees may be paid by the ESCO to the utility in the event that project acceptance and savings do not occur.

The ESCO negotiates and maintains an Energy Services Agreement (ESA) with the utility customer. The agreement outlines the obligations of each party to the agreement with respect to customer operating hours, types of equipment to be installed, and customer payments if any to the ESCO. For many common conservation measures, the risk of non-performance of the equipment primarily centers around the operating hours of the facility. Reduced operating hours will result in reduced savings from installed equipment and reduced payments from the utility.

CONCLUSIONS:

Clear policies and pricing signals from

utilities and regulators must exist before ESCOs can accurately and competitively price their services to utilities. The effective development of a productive partnership between the utility and the ESCOs will accurately link the utility's load management objectives with its customer's needs and with the capabilities offered by ESCOs.

The importance of collaboration by utilities, ESCOs and other interested groups in the DSM bid program planning stage is essential to obtain agreement by the parties who are most affected by rulemaking proceedings.

ESCOs can assist utilities by bearing many of the risks in developing and maintaining energy and capacity savings for utility customers. The benefits to utilities are postponed supply side construction risks and reduced capital recovery delay, good public relations and flexibility to meet changing load requirements.

The future offers many opportunities for the effective delivery of DSM services through ESCO - utility partnerships which combine the financing and project management capabilities of ESCOs with the program planning resources of utilities.